General

Guideline Title

Oral health for adults in care homes.

Bibliographic Source(s)

National Institute for Health and Care Excellence (NICE). Oral health for adults in care homes. London (UK): National Institute for Health and Care Excellence (NICE); 2016 Jul 5. 37 p. (NICE guideline; no. 48). [11 references]

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Recommendations

Major Recommendations

Note from the National Guideline Clearinghouse (NGC) and the National Institute for Health and Care Excellence (NICE): The recommendations in this guideline should be considered alongside the advice in Public Health England's Delivering better oral health.

The wording used in the recommendations in this guideline (for example words such as 'offer' and 'consider') denotes the certainty with which the recommendation is made (the strength of the recommendation) and is defined at the end of the "Major Recommendations" field.

Care Home Policies on Oral Health and Providing Residents with Support to Access Dental Services

These recommendations are for care home managers.

Ensure care home policies set out plans and actions to promote and protect residents' oral health. Include information about:

- Local general dental services and emergency or out-of-hours dental treatment
- Community dental services, including special care dentistry teams (see the National Health Service [NHS] Choices information on NHS dental services)
- Oral health promotion or similar services, depending on local arrangements (see "General Dental Practices and Community Dental Services" section below)
- Assessment of residents' oral health and referral to dental practitioners (see "Daily Mouth Care" section below)
- Plans for caring for residents' oral health
- Daily mouth care and use of mouth and denture care products
- What happens if a resident refuses oral health care (in line with the Mental Capacity Act and local policies about

refusal of care)
- Supply of oral hygiene equipment (for example, basic toothbrush or toothpaste)

Ensure you set out your duty of care in relation to residents' oral health needs and access to dental treatments.

Ensure the oral health policy aligns with advice in the Delivering better oral health toolkit.

Ensure the oral health policy makes it clear that only practitioners registered with the General Dental Council and acting within its scope of practice may diagnose and treat dental disease or refer someone for specialist treatment (see the NGC summary of the NICE guideline Suspected cancer: recognition and referral).

Ensure mouth care is included in existing care home policies covering residents' health and wellbeing and reviewed in line with local practice.

Ensure all care staff, new and existing residents and their families or friends (if they are involved in the resident's care) are aware of care home policies to promote health and wellbeing, including mouth care.

Oral Health Assessment and Mouth Care Plans

These recommendations are for care staff carrying out admissions or assessments.

Assess the mouth care needs of all residents as soon as they start living in a care home, regardless of the length or purpose of their stay. Consider using the oral health assessment tool. Where family and friends are involved in ongoing care, consider involving them in the initial assessment, with the residents' permission, if it will help staff understand the resident's usual oral hygiene routine. Ask:

- How the resident usually manages their daily mouth care (for example, toothbrushing and type of toothbrush, removing and caring for dentures including partial dentures). Check whether they need support.
- If they have dentures, including partial dentures, whether they are marked or unmarked. If unmarked, ask whether they would like to arrange for marking and offer to help.
- The name and address of their dentist or any dental service they have had contact with, and where and how long ago they saw a dentist or received dental treatment.

Record if there has been no contact or they do not have a dentist, and help them find one.

Make an appointment for the resident to see a dental practitioner, if necessary.

Record the results of the assessment and the appointment in the resident's personal care plan.

Review and update residents' mouth care needs in their personal care plans as their mouth care needs change (see the "Daily Mouth Care" section).

Daily Mouth Care

These recommendations are for managers of care staff who support daily personal care.

Ensure care staff provide residents with daily support to meet their mouth care needs and preferences, as set out in their personal care plan after their assessment. This should be aligned with the advice in the Delivering better oral health toolkit, including:

- Brushing natural teeth at least twice a day with fluoride toothpaste
- Providing daily oral care for full or partial dentures (such as brushing, removing food debris and removing dentures overnight)
- Using their choice of cleaning products for dentures if possible
- Using their choice of toothbrush, either manual or electric/battery powered
- Daily use of mouth care products prescribed by dental clinicians (for example, this may include a high fluoride toothpaste or a prescribed mouth rinse [see NICE's guideline Managing medicines in care homes])
- Daily use of any over-the-counter products preferred by residents if possible, such as particular mouth rinses or toothpastes; if the resident uses sugar-free gum, consider gum containing xylitol

Ensure care staff know which member of staff they can ask for advice about getting prescribed mouth care products, or helping someone to use them.

Ensure care staff know how to recognise and respond to changes in a resident's mouth care needs.

Ensure care staff know how to respond if a resident does not want daily mouth care or to have their dentures removed (see NICE's Web site page on your care).

Care Staff Knowledge and Skills

These recommendations are for care home managers.

Ensure care staff who provide daily personal care to residents:

- Understand the importance of residents' oral health and the potential effect on their general health, wellbeing and dignity.
- Understand the potential impact of untreated dental pain or mouth infection on the behaviour, and general health and wellbeing of people who cannot articulate their pain or distress or ask for help. (This includes, for example, residents with dementia or communication difficulties.)
- Know how and when to reassess residents' oral health (see "Oral Health Assessment and Mouth Care Plans," above).
- Know how to deliver daily mouth care (see "Daily Mouth Care").
- Know how and when to report any oral health concerns for residents, and how to respond to a resident's changing needs and circumstances. (For example, some residents may lose their manual dexterity over time.)
- Understand the importance of denture marking and how to arrange this for residents, with their permission.

Availability of Local Oral Health Services

This recommendation is for health and wellbeing boards.

Ensure local oral health services address the identified needs of people in care homes, including their need for treatment. Identify gaps in provision. (See recommendation 1 in NICE's guideline Oral health: approaches for local authorities and their partners to improve the oral health of their communities .) This includes:

- General dental practices
- Community dental services, including special care dentistry (for more information see NHS England)
- Oral health promotion or similar services, in line with existing local arrangements
- Emergency and urgent out-of-hours dental treatment

This recommendation is for care home managers.

Tell local healthwatch and public health teams about any concerns you have about the availability of local dental and oral health promotion services.

Oral Health Promotion Services

These recommendations are for oral health promotion teams or similar services, in line with existing local arrangements.

Develop and provide care homes with oral health educational materials, support and training to meet the oral health needs of all residents, especially those with complex needs. Also explain the role of diet, alcohol and tobacco in promoting good oral health, in line with advice in the Delivering better oral health toolkit and NICE's guideline Oral health promotion: general dental practice .

Help care home managers find out about local oral health services and create local partnerships or links with general dental practice and community dental services including special care dentistry.

Tell local authority public health teams and dental public health leads about gaps in the services, so they can advocate for accessible oral and dental health services on behalf of residents of care homes.

General Dental Practices and Community Dental Services

These recommendations are for dental practitioners.

Provide residents in care homes with routine or specialist preventive care and treatment as necessary, in line with local arrangements (see NICE's guidelines Dental checks: intervals between oral health reviews , Oral health: approaches for local authorities and their partners to improve the oral health of their communities and Oral health promotion: general dental practice) .

Ensure dentures made for individual residents are appropriately marked by the lab during manufacture.

Definitions

Strength of Recommendations

Some recommendations can be made with more certainty than others. The committee makes a recommendation based on the trade-off between the benefits and harms of an intervention, taking into account the quality of the underpinning evidence. For some interventions, the GC is confident that, given the information it has looked at, most patients would choose the intervention. The wording used in the recommendations in this guideline denotes the certainty with which the recommendation is made (the strength of the recommendation).

Interventions That Must (or Must Not) Be Used

The committee usually uses 'must' or 'must not' only if there is a legal duty to apply the recommendation. Occasionally 'must' (or 'must not') is used if the consequences of not following the recommendation could be extremely serious or potentially life threatening.

Interventions That Should (or Should Not) Be Used – a 'Strong' Recommendation

The committee uses 'offer' (and similar words such as 'refer' or 'advise') when confident that, for the vast majority of patients, an intervention will do more good than harm, and be cost effective. Similar forms of words are used (for example, 'do not offer…') when the GC is confident that an intervention will not be of benefit for most patients.

Interventions That Could Be Used

The committee uses 'consider' when confident that an intervention will do more good than harm for most patients, and be cost effective, but other options may be similarly cost effective. The choice of intervention, and whether or not to have the intervention at all, is more likely to depend on the patient's values and preferences than for a strong recommendation, and so the healthcare professional should spend more time considering and discussing the options with the patient.

Clinical Algorithm(s)

A National Institute for Health and Care Excellence (NICE) pathway titled "Oral Health for Adults in Care Homes" is provided on the NICE Web site .

Scope

Disease/Condition(s)

Oral and dental health

Guideline Category

Evaluation

Management

Prevention

Clinical Specialty

Dentistry

Geriatrics

Preventive Medicine

Intended Users

Allied Health Personnel

Dentists

Health Care Providers

Nurses

Other

Public Health Departments

Guideline Objective(s)

To provide recommendations on oral health care, including dental health and daily mouth care, for adults in care homes with the aim of maintaining and improving their oral health and ensuring timely access to dental treatment

Target Population

Residents (adults aged 18 and older) in care homes

Interventions and Practices Considered

1. Ensuring that care home policies set out plans and actions to promote and protect residents' oral health and support access to dental services
2. Providing oral health assessment and mouth care plans for residents
3. Providing residents with support for daily mouth care
    - Brushing teeth
    - Denture care
    - Choice of toothbrush (manual or electric/battery)
    - Use of mouth care products prescribed by dental clinicians (e.g., high-fluoride toothpaste or a prescribed mouth rinse)
    - Use of over-the-counter mouth care products (mouth rinses, toothpaste, sugar-free gum)
    - Ensuring that care staff know how to recognise and respond to changes in a resident's mouth care needs
4. Ensuring that care staff have sufficient knowledge about oral health and skills to provide mouth care
5. Developing and providing care homes with oral health educational materials, support and training to meet the oral health needs of all residents
6. Providing residents in care homes with routine or specialist preventive care and treatment as necessary, in line with local arrangements
7. Ensuring that dentures made for residents are appropriately marked by the lab during manufacture

Major Outcomes Considered

- Changes in:
    - The oral health of people living in care homes (e.g., by identifying earlier the incidence and prevalence of tooth decay, periodontal disease, oral discomfort including pain and oral cancer, leading to a change in nutritional status among people living in care homes)
    - Modifiable risk factors, including the use of fluoride toothpaste, fluoride supplements, fluoride varnishes, frequency and quality of oral hygiene practices, and access to or visits from dental services
    - Policies or procedures in care homes
    - Knowledge and attitudes of care home managers and staff, and other health and social care professionals
    - Resident's quality of life, including social and emotional wellbeing
    - People's knowledge and ability to improve and protect their oral health
    - People's oral health behaviours
- Adverse events or unintended consequences

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Searches of Unpublished Data

Description of Methods Used to Collect/Select the Evidence

Note from the National Guideline Clearinghouse (NGC): Three evidence reviews for this guideline were developed by the Specialist Unit for Review Evidence (SURE), Dental Public Health Unit, Dental School, Cardiff University (see the "Availability of Companion Documents" field).

Review 1: Effectiveness

Review Question

What approaches, activities or interventions are effective in promoting and protecting oral health and ensuring access to dental care (including regular check-ups) for adults in care homes?

Literature Search

A systematic review of effectiveness evidence to address the above review question was undertaken. A wide range of databases and Web sites were searched systematically, supplemented by grey literature (technical or research reports, doctoral dissertations, conference papers and official publications searches). Searches were carried out to identify relevant evidence in the English language published between January 1995 and September 2014 that is:

- Of the highest quality available
- Publicly available, including trials in press ("academic in confidence")

The following types of evidence were sought for inclusion: systematic reviews and meta-analyses*; randomised controlled trials; controlled trials; controlled before and after studies, interrupted time series, uncontrolled before and after studies.

For the search, a strategy was developed in Ovid Medline (see Appendix 1 of Evidence Review 1) and was adapted to all other databases listed below.

Databases

- AMED (Allied and Complementary Medicine) - Ovid
- ASSIA (Applied Social Science Index and Abstracts) - Proquest
- CINAHL (Cumulative Index of Nursing and Allied Health Literature) - EBSCO
- EMBASE - Ovid
- Health Management Information Consortium (HMIC) - Ovid
- MEDLINE and MEDLINE in Process - Ovid
- OpenGrey http://www.opengrey.eu/
- Social Care Online http://www.scie-socialcareonline.org.uk/

See Section 2.1 in Evidence Review 1 for the list of searched Web sites.

In addition a variety of supplementary methods were employed to identify additional research:

- For included papers, reference lists were checked and citation tracking was undertaken in Web of Science and Scopus databases.
- The electronic table of contents of three key journals were searched: *Special Care in Dentistry*, *The Journal of Disability* and *Oral Health and Gerodontology*.

- Experts in the field and authors of included papers were contacted to identify additional research and 'sibling' studies.
- A call for evidence was issued by National Institute for Health and Care Excellence (NICE).

Results of all searches were combined in a Reference Manager 12 database.

*Unless directly relevant to answering one or more question, systematic reviews and meta-analyses will be unpicked to identify studies meeting the inclusion criteria.

Inclusion/Exclusion Criteria

Refer to Section 2.2 in Evidence Review 1 for inclusion and exclusion criteria.

Study Selection

After de-duplication and removal of clearly irrelevant citations (e.g., papers not related to oral health, animal studies), study selection at both title/abstract and full text stages was undertaken independently by two reviewers using the inclusion and exclusion criteria. Any disagreements at either stage were resolved by recourse to a third reviewer. Papers excluded at full text are reported in Appendix J in Review 1 with the reason for exclusion.

Review 2: Best Practice

Review Question

What methods and sources of information will help care home managers and their staff identify and meet the range of oral health needs and problems experienced by people living in care homes?

Literature Search

A systematic review of best practice evidence to address the above review question was undertaken. A wide range of databases and Web sites were searched systematically supplemented by grey literature searches. Searches were carried out to identify best practice in the English language published between January 1995 and September 2014.

The following types of evidence were sought for inclusion: guidelines developed by governmental bodies and specialist societies, care pathways, tools, toolkits/resource guides, quality improvement projects and UK health directives.

For the search, a strategy was developed in Ovid Medline (see Appendix 1 in Evidence Review 2) and was adapted to all other databases.

The databases searched were the same as in Review 1, as were the supplementary methods to identify additional search (see above).

See Section 2.1 in Evidence Review for the list of searched websites.

Inclusion and Exclusion Criteria

See Section 2.2 in Evidence Review 2 for inclusion and exclusion criteria.

Document Selection

See "Study Selection" section above. Papers and documents excluded at full text are reported in Appendix G of Evidence Review 2 with the reason for exclusion.

Review 3: Barriers and Facilitators

Review Question

What helps and hinders approaches to promote and protect oral health and access to dental check-ups and treatment in care homes?

Literature Search

A systematic review of quantitative and qualitative research to address the above question was undertaken. A wide range of databases and Web sites were searched systematically supplemented by grey literature searches. Searches were carried out to identify research as to what helps and hinders approaches to promote and protect oral health, and access to dental check-ups and treatment in care homes.

The following types of evidence were sought for inclusion: quantitative and qualitative research that reported the views and perspectives of service users and providers, in the English language and published between January 1995 and September 2014.

See "Review 1: Effectiveness" above for the information on searched databases and supplementary methods employed to identify additional research.

See Section 2.1 in Evidence Review 3 for information on Web sites searched.

Results of all searches were combined in a Reference Manager 12 database.

Inclusion and Exclusion Criteria

See Section 2.1 in Evidence Review 3 for inclusion/exclusion criteria.

Study Selection

See the "Study Selection" section in Review 1 above. Papers and documents excluded at full text are reported in Appendix K of Evidence Review 3 with the reason for exclusion.

Number of Source Documents

The search strategy identified 1,608 citations from database searching of which 653 were excluded as duplicates or clearly irrelevant (e.g., animal studies or no mention of oral health). 1,253 citations (955 from the database searches and 298 from Web site searching) were reviewed in title and abstract and 354 in full text. Full details, including final numbers of studies and flow diagrams, are provided in Section 3.1 of the evidence reviews.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Review 1: Effectiveness

Quality assessment was conducted using the relevant quality appraisal checklist (National Institute for Health and Care Excellence [NICE] 2012). Each study was rated ('++', '+' or '−') to indicate its quality.

++ All or most of the checklist criteria have been fulfilled, and where they have not been fulfilled the conclusions are very unlikely to alter.

+ Some of the checklist criteria have been fulfilled, and where they have not been fulfilled, or are not adequately described, the conclusions are unlikely to alter.

− Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

Standardised terms have been used in the evidence statements to describe the strength of the evidence in keeping with the NICE guidelines manual (NICE 2014) (see the "Availability of Companion Documents" field).

No evidence: Where there is no evidence, this is clarified with information on the search scope and date (e.g., English language studies from 1995 onwards).

Weak evidence: 'There was weak evidence from 1 (−) randomised controlled trial (RCT).

Moderate evidence: 'There was moderate evidence from 2 (+) controlled before and after studies'.

Strong evidence: 'There was strong evidence from 2 (++) controlled before and after studies and 1 (+) RCT'.

Inconsistent evidence: Where inconsistent evidence is identified, this will be accompanied by an explanatory sentence or section, with details of variations.

Review 2: Best Practice

Guidelines were assessed independently in duplicate using the Appraisal of Guidelines for Research and Evaluation II (AGREE II) Instrument. This instrument evaluates the process of developing the guideline and the reporting process. Using the instrument, reviewers evaluate six domains, giving

percentage scores for each domain. They also agree an overall score on a range of 1 to 7 where 1 is the lowest and 7 the highest quality evidence.

Where information providers are accredited under the NICE Accreditation Scheme (NICE 2013) this was considered a sufficient guarantor of quality as the accreditation scheme is based on the AGREE II Instrument. A clear distinction has been made between evidence based and expert (consensus) based guidelines.

Review 3: Barriers and Facilitators

++ All or most of the checklist criteria have been fulfilled, and where they have not been fulfilled the conclusions are very unlikely to alter.

+ Some of the checklist criteria have been fulfilled, and where they have not been fulfilled, or are not adequately described, the conclusions are unlikely to alter.

− Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

Methods Used to Analyze the Evidence

Meta-Analysis

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Note from the National Guideline Clearinghouse (NGC): Three evidence reviews for this guideline were developed by the Specialist Unit for Review Evidence (SURE), Dental Public Health Unit, Dental School, Cardiff University (see the "Availability of Companion Documents" field).

Review 1: Effectiveness

Quality Assessment

Quality assessment was conducted using the relevant quality appraisal checklist (NICE 2012). Each paper was assessed by one reviewer and checked for accuracy by another. Ten percent of the studies were double assessed. Each study was rated ('++', '+' or '−') to indicate its quality (see the "Rating Scheme for the Strength of the Evidence" field).

See Appendix B in Evidence Review 1 for the information on quality of included guidelines.

Data Extraction – Study Characteristics and Methodology

Evidence was extracted directly into a form agreed with NICE. Data was selected and characterised using PROGRESS-Plus.

Each data extraction form was completed by one reviewer and checked for accuracy by another. Ten percent of the studies were extracted independently by two reviewers.

Papers were added to an NVivo database and relevant outcomes and demographic data was coded. This allowed rapid identification for data 'slicing', including data specific to populations of interest.

Data Synthesis

The key findings of evidence are summarised in concise narrative summaries and evidence statements which are supported by evidence tables (see Appendix A in Evidence Review 1). The evidence statements indicate the message given by the evidence and the applicability of the results to the UK.

Meta-analysis proved feasible for some studies reporting the following outcome measures: Plaque Index, Gingival Index, and Denture Hygiene/Plaque. A number of studies reported the Simplified Oral Hygiene Index and Denture Plaque Indices but sufficient outcome data in the papers were not available to permit meta-analysis for these outcomes.

See Section 2.6 in the Evidence Review 1 for detailed information on the data synthesis performed for this review.

Developing Evidence Statements

Standardised terms have been used in the evidence statements to describe the strength of the evidence (see the "Rating Scheme for the Strength of

the Evidence" field) in keeping with the NICE guidelines manual (NICE 2014) (see the "Availability of Companion Documents" field).

The direction of effect is summarised by the use of positive, negative, mixed and none with appropriate contextual detail. Where synthesis of results was feasible via meta-analysis, the effect size and 95% confidence interval are reported within the evidence statement. Where this was not feasible, the number of studies reporting statistically significant and non-significant results was reported. Due to the wide variation in intervention design and outcomes it was not feasible to define and use standard notations such as small, medium or large for direction of effect.

Each evidence statement is accompanied by information on the applicability of the evidence to the UK population and sub-populations as directly applicable, partially applicable or not applicable to the UK population using guidance from the Manual (NICE 2014). Details of the population, setting, intervention (including any costs if provided) and outcomes are provided in the evidence statements (see Appendix 1 in Evidence Review 1).

Review 2: Best Practice

Quality Assessment

Quality assessment was only possible for guidelines as assessment tools do not exist for assessing the other types of document identified: care pathways, tools, toolkits, Quality Improvement projects and governmental directives.

Guidelines were assessed independently in duplicate using the Appraisal of Guidelines for Research and Evaluation II (AGREE II) Instrument. This instrument evaluates the process of developing the guideline and the reporting process. Using the instrument, reviewers evaluate six domains, giving percentage scores for each domain. They also agree an overall score on a range of 1 to 7 where 1 is the lowest and 7 the highest quality evidence.

Where information providers are accredited under the NICE Accreditation Scheme (NICE 2013) this was considered a sufficient guarantor of quality as the accreditation scheme is based on the AGREE II Instrument. A clear distinction has been made between evidence based and expert (consensus) based guidelines.

See Appendix B in Evidence Review 2 for a quality summary of included guidelines.

Data Extraction – Characteristics and Methodology

Evidence was extracted directly into a form agreed with NICE.

Where possible, data were selected and characterised using PROGRESS-Plus to identify disadvantaged populations. PROGRESS is an acronym for: Place of Residence, Race/Ethnicity, Occupation, Gender, Religion, Education, Socioeconomic Status, and Social Capital. Plus represents additional categories such as Age, Disability, and Sexual Orientation.

Papers were added to an NVivo database and key components of best practice coded including, where available, data specific to populations including stroke patients and those with cognitive impairments.

Data Synthesis

Major themes were identified, discussed and are summarised in Evidence Summaries (ES). The statements indicate particular elements of best practice, the documents in which they were identified and, where quality assessment was possible, an overall score for that document.

An Evidence Table with brief summaries of the included documents is provided in Appendix A of Evidence Review 2.

Review 3: Barriers and Facilitators

Quality Assessment

Critical appraisal was carried out using the appropriate checklist from the methods for the development of NICE public health guidance (NICE 2012).

Quantitative cross-sectional studies were assessed using a modified version of the Correlation Studies checklist (NICE 2012). The modified checklist contains an additional question relating to piloting of survey items and highlights questions that are only applicable to either correlation studies or cross-sectional surveys. Other checklists were used without modification.

Studies were assessed by one reviewer and checked by a second, and disagreements resolved by discussion. Ten percent of the studies were double assessed. Each study was rated ('++', '+' or '–') to indicate its quality (see the "Rating Scheme for the Strength of the Evidence" field). Appendices B-D in Evidence Review 3 provide a summary of the validity ratings for each element of the included studies.

Data Extraction – Characteristics and Methodology

Evidence was extracted directly into the Evidence Table format agreed with NICE (see Appendix A Evidence Review 3). Each data extraction form was completed by one reviewer and checked for accuracy by another. Ten percent of the documents were extracted independently by two reviewers.

Where possible, data were selected and characterised using PROGRES-Plus to identify disadvantaged populations. PROGRESS is an acronym for: Place of Residence, Race/Ethnicity, Occupation, Gender, Religion, Education, Socioeconomic Status, and Social Capital. Plus represents additional categories such as Age, Disability, and Sexual Orientation.

Data Synthesis

A synthesis of views regarding barriers and facilitators was guided by the NICE manual (NICE 2012, Section 5.4) and Dixon Woods (2004).

A broad synthesis of the included evidence was performed. Analysis was conducted in stages (method), and themes were generated from data. Qualitative NVivo software was used to highlight and retrieve coded text in order to assist analysis. Views and opinions gathered from cross-sectional questionnaires and mixed methods studies were analysed thematically and integrated with the key findings from qualitative studies.

Findings are summarised in concise narrative summaries and evidence statements, supported by the Evidence Table (see Appendix A in Evidence Review 3). The statements indicate the message given by the evidence and the applicability of the results to the UK.

Conceptual Framework

A conceptual framework was developed and refined based on the results of the review. The framework identifies and maps key factors that act as barriers/facilitators to the provision of oral care. These are mapped for specific groupings: residents, carers, care homes and dental teams. See Figure 1 in Evidence Review 3.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

The committee considered research from 3 high quality evidence reviews conducted by an independent review team (see the "Availability of Companion Documents" field). Members noted the lack of research about the oral health needs of younger adults in care homes.

The committee noted that oral health research tends to use clinical dental indices (such as the plaque, gingival and denture plaque indices) as outcome measures. It observed that by looking only at clinical outcomes, the research does not reflect other outcomes that are more important to people, such as wellbeing. The committee also noted that there is no accepted mechanism for converting the resulting 'scores' into outcomes that matter to patients, residents or carers, such as improved self-esteem, dignity, or quality of life.

The committee considered that the choice of measures in the past may have hindered high quality research to develop innovative person-centred outcome measures. It discussed the urgent need for measures and study designs to capture the perspective of the full range of residents living in care homes.

This would include how much importance residents, or those who care for them, place on having a clean, pain-free, healthy mouth. It would also include how poor oral health may affect the care they receive, and how their dignity and individuality are respected and understood (especially with regard to wearing and removal of dentures).

Refer to "The Committee's Discussion" section of the original guideline document for discussions that explain how the committee made its recommendations.

Rating Scheme for the Strength of the Recommendations

Strength of Recommendations

Some recommendations can be made with more certainty than others. The committee makes a recommendation based on the trade-off between

the benefits and harms of an intervention, taking into account the quality of the underpinning evidence. For some interventions, the Guideline Committee (GC) is confident that, given the information it has looked at, most patients would choose the intervention. The wording used in the recommendations in this guideline denotes the certainty with which the recommendation is made (the strength of the recommendation).

Interventions That Must (or Must Not) Be Used

The committee usually uses 'must' or 'must not' only if there is a legal duty to apply the recommendation. Occasionally 'must' (or 'must not') is used if the consequences of not following the recommendation could be extremely serious or potentially life threatening.

Interventions That Should (or Should Not) Be Used – a 'Strong' Recommendation

The committee uses 'offer' (and similar words such as 'refer' or 'advise') when confident that, for the vast majority of patients, an intervention will do more good than harm, and be cost effective. Similar forms of words are used (for example, 'do not offer…') when the GC is confident that an intervention will not be of benefit for most patients.

Interventions That Could Be Used

The committee uses 'consider' when confident that an intervention will do more good than harm for most patients, and be cost effective, but other options may be similarly cost effective. The choice of intervention, and whether or not to have the intervention at all, is more likely to depend on the patient's values and preferences than for a strong recommendation, and so the healthcare professional should spend more time considering and discussing the options with the patient.

Cost Analysis

Economic Evidence

There is very limited published economic evidence on interventions to improve the oral health of care home residents. In the absence of such evidence, NICE would usually develop a bespoke model to estimate cost-effectiveness, ideally using the preferred method of cost–utility analysis.

NICE explored this approach after identifying evidence that poor oral health may be associated with cardiovascular disease and respiratory disease (utility values are available for these health states, so a cost–utility analysis would be possible). However, on further examination and after discussion with the committee, it was decided that the evidence was insufficient to show that poor oral health directly causes these diseases. So a cost–utility model was not developed.

Based on the evidence available, it was apparent the economic analysis would be limited to measures of oral health. Moreover, given the lack of evidence on health-state utility values related to oral health, the committee supported development of a cost–consequences analysis, rather than a cost–utility analysis. It favoured this approach because it can capture a wide range of benefits. However, the outcomes of the source studies were limited to clinical measures and so the economic model analysis could not, as had been hoped, report on a wide range of benefits.

The committee agreed that the effectiveness review had identified the best available evidence to inform the analysis and 2 interventions were included:

- Direct education of care staff and oral health care
- Direct education of care staff, and use of a protocol for planning and delivering oral care and compliance checking

These interventions mirrored the types of approaches the committee was considering making recommendations about.

The perspective of the cost–consequences analysis was a single care home. The time horizon was 2 years, based on the average length of stay for a resident reported in the literature. The inputs included:

- Number of residents
- Percentage of residents who need help with daily oral care
- Whether residents use manual or electric toothbrushes
- Roles of staff carrying out the interventions
- Whether the time of staff who attend oral education training is 'back filled'
- Number of education sessions to ensure all relevant staff are trained

Refer to "Economic Evidence" in the original guideline document for additional information, including results.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

Commenting on the Draft Guideline

The draft version of the guideline is posted on the National Institute for Health and Care Excellence (NICE) Web site for consultation with registered stakeholders and respondents. Stakeholders can register at any point during guideline development. NICE informs registered stakeholders and respondents that the draft is available and invites them to comment by the deadline. Questions for stakeholders are posted with the draft guideline. The purpose of these questions is to seek stakeholder views on factors such as the potential equality impact. NICE also asks stakeholders to comment on recommendations identified as likely to substantially increase costs, and their justification, and to consider whether any other draft recommendations are expected to add substantial costs.

Principles of Responding to Stakeholder Comments

After consultation the Committee discusses the comments received during consultation, proposes any changes needed to the guideline, and agrees the final wording of the recommendations.

Developers must take the following key points into account when responding to comments from registered stakeholders:

- Each comment must be acknowledged and answered as directly, fully and with as much information as possible.
- For a draft guideline, the Committee must consider whether changes to the guideline are needed as a result of consultation comments; any changes to the guideline must be agreed by the Committee before publication.
- If changes are made to a guideline as a result of a consultation comment, this must be made clear in the response to the comment. If no changes have been made, it should be clear from the response why not.
- Developers should maintain an audit trail of any changes made to the guideline.

Registered stakeholders who have commented on the draft guideline are sent the final guideline, in confidence 2 weeks before publication (see chapter 11). Comments and responses are made available on the NICE Web site when the final guideline is released.

Comments received from nonâ€‘registered stakeholders and individuals are reviewed by the Committee. A formal response is not given and these comments are not made available on the NICE Web site. However, if they result in changes to the guideline this is recorded in the Committee meeting minutes.

Comments received after the deadline are not considered and are not responded to; in such cases the sender will be informed.

Refer to "Developing NICE guidelines: the manual" (see the "Availability of Companion Documents" field) for additional information.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

Details of the evidence discussed are in evidence reviews, reports and papers from experts in the area.

The evidence statements or evidence summaries are short summaries of evidence. Each statement has a short code indicating which document the evidence has come from.

Evidence statement (ES) number 1.1 indicates that the linked statement is numbered 1 in review 1: 'Effectiveness'. ES2.1 indicates that the linked evidence summary is numbered 1 in review 2: 'Best practice'. ES3.1 indicates that the linked statement is numbered 1 in review 3: 'Barriers and facilitators'. EP1 indicates that expert paper 1 'NHS dental services commissioning: oral health for adults in care homes' is linked to a recommendation. EP2 that expert paper 2 'Oral health in residential and nursing homes younger adults' is linked. And EP3 that expert paper 3 'Oral health in residential and nursing homes: care home managers' is linked.

If a recommendation is not directly taken from the evidence statements, but is inferred from the evidence, this is indicated by IDE (inference derived from the evidence) (see "Evidence Reviews" section in the original guideline document).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

The evidence showed that care home policies that included regular mouth care routines and dental examinations, supported by good communication and accountability to ensure those routines were followed, were associated with improved oral health and better mouth care. Not having these elements reduced the likelihood of benefits.

Potential Harms

There are well-recognised side effects of chlorhexidine—mucosal irritation, altered taste sensation, staining of teeth and restorations, tongue discolouration and parotid gland swelling. The committee discussed evidence about the effectiveness of chlorhexidine presented in Evidence Review 1 (see the "Availability of Companion Documents" field). This reported both improvements and adverse effects during use. The committee was also aware of reports of an anaphylactic reaction to chlorhexidine and the fact that the Medicines and Healthcare Regulatory Authority has issued a drug safety notice about hypersensitivity (Chlorhexidine: reminder of potential for hypersensitivity).

Qualifying Statements

Qualifying Statements

- The recommendations in this guideline represent the view of the National Institute for Health and Care Excellence (NICE), arrived at after careful consideration of the evidence available. When exercising their judgement, professionals are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or service users. The application of the recommendations in this guideline are not mandatory and the guideline does not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.
- Local commissioners and/or providers have a responsibility to enable the guideline to be applied when individual health professionals and their patients or service users wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.

Implementation of the Guideline

Description of Implementation Strategy

Putting This Guideline into Practice

The National Institute for Health and Care Excellence (NICE) has produced tools and resources to help put this guideline into practice.

Putting recommendations into practice can take time. How long may vary from guideline to guideline, and depends on how much change in practice or services is needed. Implementing change is most effective when aligned with local priorities.

Changes should be implemented as soon as possible, unless there is a good reason for not doing so (for example, if it would be better value for money if a package of recommendations were all implemented at once).

Different organisations may need different approaches to implementation, depending on their size and function. Sometimes individual practitioners

may be able to respond to recommendations to improve their practice more quickly than large organisations.

Here are some pointers to help organisations put NICE guidelines into practice:

1. Raise awareness through routine communication channels, such as email or newsletters, regular meetings, internal staff briefings and other communications with all relevant partner organisations. Identify things staff can include in their own practice straight away.
2. Identify a lead with an interest in the topic (it could be someone who is already championing oral health in your local area) to motivate and support others to use the guideline and make service changes, and to find out about any significant issues locally.
3. Carry out a baseline assessment against the recommendations to find out whether there are gaps in current service provision.
4. Think about what data you need to measure improvement and plan how you will collect it. You may want to work with other health and social care organisations and specialist groups to compare current practice with the recommendations. This may also help identify local issues that will slow or prevent implementation.
5. Develop an action plan, with the steps needed to put the guideline into practice, and make sure it is ready as soon as possible. Big, complex changes may take longer to implement, but some may be quick and easy to do. An action plan will help in both cases.
6. For very big changes include milestones and a business case, which will set out additional costs, savings and possible areas for disinvestment. A small project group could develop the action plan. The group might include the guideline champion, a senior organisational sponsor, staff involved in the associated services, finance and information professionals.
7. Implement the action plan with oversight from the lead and the project group. Big projects may also need project management support.
8. Review and monitor how well the guideline is being implemented through the project group. Share progress with those involved in making improvements, as well as relevant boards and local partners.

NICE provides a comprehensive programme of support and resources to maximise uptake and use of evidence and guidance. See the into practice pages for more information.

Also see Leng G, Moore V, Abraham S, editors (2014) Achieving high quality care – practical experience from NICE. Chichester: Wiley.

Implementation Tools

Clinical Algorithm

Mobile Device Resources

Quick Reference Guides/Physician Guides

Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

National Institute for Health and Care Excellence (NICE). Oral health for adults in care homes. London (UK): National Institute for Health and Care Excellence (NICE); 2016 Jul 5. 37 p. (NICE guideline; no. 48). [11 references]

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2016 Jul 5

Guideline Developer(s)

National Institute for Health and Care Excellence (NICE) - National Government Agency [Non-U.S.]

Source(s) of Funding

National Institute for Health and Care Excellence (NICE)

Guideline Committee

Oral Health for Adults in Care Homes Public Health Advisory Committee

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Public Health Advisory Committee Members: Paul Lincoln (*Chair*), Chief Executive, UK Health Forum; Ralph Bagge (*Vice-chair*), Lay Core Member; Obaghe Edeghere (from 1/3/16), Consultant Epidemiologist, Public Health England; Ruth Hall (resigned Feb 2016), Public Health Consultant; Jane Royle (resigned June 2015), Associate Director of Public Health, Cornwall Council; Matthew Taylor, Director, York Health Economics Consortium; Jeremy Wight (resigned Nov 2015), Director of Public Health, Sheffield City Council (up to April 2015), Non-executive Director, Chesterfield Royal Hospital (from Aug 2015); Ann Williams, Commissioning and Contract Manager, Liverpool City Council

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Financial Disclosures/Conflicts of Interest

The effective management of conflicts of interests is an essential element in the development of the guidance and advice that the National Institute for Health and Care Excellence (NICE) publishes. Please refer to the NICE Web site for the Policy on Conflicts of Interest. Declarations of all Guideline Committee members are available on the NICE Web site.

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Available from the National Institute for Health and Care Excellence (NICE) Web site . Also available for download in ePub or eBook formats from the NICE Web site .

Availability of Companion Documents

The following are available:

- Weightman A, Demeyin W, Morgan F, Chestnutt I, Farnell D, Johnson I, Strange H, Searchfield L, Mann M. Approaches for adult nursing and residential care homes on promoting oral health, preventing dental health problems and ensuring access to dental treatment. Review 1: Effectiveness. Cardiff (UK): Specialist Unit for Review Evidence (SURE), Dental Public Health Unit, Dental School, Cardiff University; 2015 Jul. 77 p. Available from the National Institute for Health and Care Excellence (NICE) Web site .
- Weightman A, Demeyin W, Morgan F, Chestnutt I, Farnell D, Johnson I, Strange H, Searchfield L, Mann M. Approaches for adult nursing and residential care homes on promoting oral health, preventing dental health problems and ensuring access to dental treatment. Review 1: Appendices. Cardiff (UK): Specialist Unit for Review Evidence (SURE), Dental Public Health Unit, Dental School, Cardiff University; 2015 Jul. 96 p. Available from the NICE Web site .
- Morgan F, Demeyin W, Weightman A, Strange H, Chestnutt I, Farnell D, Johnson I, Searchfield L, Mann M. Approaches for adult nursing and residential care homes on promoting oral health, preventing dental health problems and ensuring access to dental treatment. Review 2: Best practice. Cardiff (UK): Specialist Unit for Review Evidence (SURE), Dental Public Health Unit, Dental School, Cardiff University; 2015 Jul. 114 p. Available from the NICE Web site .
- Johnson I, Weightman A, Demeyin W, Morgan F, Mann M, Strange H, Chestnutt I, Farnell D, Searchfield L. Approaches for adult nursing and residential care homes on promoting oral health, preventing dental health problems and ensuring access to dental treatment. Review 3: Barriers and facilitators. Cardiff (UK): Specialist Unit for Review Evidence (SURE), Dental Public Health Unit, Dental School, Cardiff University; 2015 Jul. 63 p. Available from the NICE Web site .
- Johnson I, Weightman A, Demeyin W, Morgan F, Mann M, Strange H, Chestnutt I, Farnell D, Searchfield L. Approaches for adult nursing and residential care homes on promoting oral health, preventing dental health problems and ensuring access to dental treatment. Review 3: barriers and facilitators. Appendices. Cardiff (UK): Specialist Unit for Review Evidence (SURE), Dental Public Health Unit, Dental School, Cardiff University; 2015 Jul. 105 p. Available from the NICE Web site .
- Oral health for adults in care homes. Baseline assessment tool. London (UK): National Institute for Health and Care Excellence; 2016 Jul. (NICE guideline; no. 48). Available from the NICE Web site .
- Oral health for adults in care homes. Resource impact report. London (UK): National Institute for Health and Care Excellence; 2016 Jul. 6 p. (NICE guideline; no. 48). Available from the NICE Web site .
- Oral health for adults in care homes. Resource impact template. London (UK): National Institute for Health and Care Excellence; 2016 Jul. (NICE guideline; no. 48). Available from the NICE Web site .
- The guidelines manual 2012. London (UK): National Institute for Health and Care Excellence (NICE); 2012 Nov. Available from the NICE Web site .
- Developing NICE guidelines: the manual. London (UK): National Institute for Health and Care Excellence (NICE); 2014 Oct. Available from the NICE Web site .

Quick guides are also available from the NICE Web site .

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on December 7, 2016.

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